5.13 FOREST MANAGEMENT ACTIVITIES

Accessible pine and fir forest lands in the Lake Tahoe Basin were heavily logged by clearcut methods in the middle to late 1800s. Most private timberlands in the basin which had not been harvested earlier were logged between 1950 and 1971. Although the current Forest Management Plan for the USFS Lake Tahoe Basin Management Unit (LTBMU) emphasizes watershed protection over commercial timber sales, large-scale tree dieoffs from drought-related stresses in the 1980s and early 1990s have prompted proposals for extensive sanitation/salvage cuts to reduce fire hazard and increase forest health. TRPA encourages public and private vegetation management to increase plant community diversity, and the California Tahoe Conservancy carries out forest management (silvicultural) projects on the lands it has purchased. Because much of the Lake Tahoe Basin is forested, land clearing for development projects often involves timber harvest.

Because the potential contributions of an individual forest management operation to stream sedimentation may not be fully realized until years after that operation is concluded, attempts to compute loadings on an individual project basis are likely to result in underestimates. Forest management activities can create water quality problems if sites are left bare of vegetation, if riparian vegetation is disturbed, or if soil is disturbed by road construction, skid trails, or use of vehicles off of roadways. Even if Best Management Practices are followed, some impact on water quality can be expected from forest management activities.

Both remedial actions to correct problems from past timber harvest, and controls to prevent problems associated with future forest management activities are necessary for the protection of the waters of the Lake Tahoe Basin. The most important control measures needed on forest lands are remedial erosion control projects and control of erosion on forest dirt roads (see the sections of this Chapter on offset and on roads and rights-of-way). BMPs are also needed to minimize water quality problems from activities on forest lands. Controls should ensure that access roads, which increase drainage density, are well-placed and designed, and that skidding and related practices do not significantly disturb soils and vegetation. Since timber harvesting may take place on steep slopes with poor land capability, required management practices should take slope differences into account. As noted in Section 5.3 (BMPs), no one BMP is 100 percent effective, and the use of BMPs does not provide assurance of compliance with state effluent limitations. BMPs must be monitored to ensure that measures are effective and that water quality is protected. If monitoring shows that a measure is ineffective, then additional measures must be applied until water quality standards are attained.

Control Measures

The Regional Board's general procedures for review of forest management activities on public and private lands are discussed in Chapter 4. The following is a summary of special measures which must be used in the Lake Tahoe Basin to protect sensitive watersheds and surface waters.

Forest management activities (in the Lake Tahoe Basin) should follow practices to protect vegetation not being removed, prevent damage to riparian vegetation, and provide for prompt soil stabilization and revegetation where necessary to prevent erosion.

Even stricter controls than the statewide Forest Practice Rules for silvicultural activities adopted by the California Board of Forestry may need to be applied in the Lake Tahoe Basin to take into account the unique conditions of the Basin and the mandate of the federal nondegradation standard. The Forest Practice Rules will not be certified as the BMPs applicable to silvicultural activities in the Tahoe Basin until they are revised to include the controls necessary to protect Lake Tahoe water quality.

Timber harvesting on National Forest land in the Lake Tahoe Basin is regulated by the LTBMU. The LTBMU uses the “Cumulative Watershed Effects” (CWE) method (USFS 1988) to evaluate the impacts of logging together with those of other disturbances in a watershed.

Private and State timber harvesting and other forms of tree removal in the Lake Tahoe Basin are regulated by the state forestry departments, and by the Tahoe Regional Planning Agency under the 208 Plan and TRPA Ordinance Chapter 71. TRPA has

delegated most of the permitting authority for private tree cutting to the California Department of Forestry and Fire Protection (CDF). Unless conditions can be set by TRPA and/or CDF which will adequately protect water quality, the timber harvest should not be permitted. If other agencies fail to enforce the controls on timber harvesting and other forest management activities called for in this plan, the Lahontan Regional Water Quality Control Board shall issue waste discharge requirements enforcing controls. The Regional Board will use both the State and TRPA criteria below in its review of proposals for forest management activities in the Lake Tahoe Basin.

The 208 Plan Handbook of Best Management Practices (Vol. II) incorporates the silvicultural BMPs from the USFS's statewide BMP handbook. In addition, the 208 Plan (Vol. I, page 148) includes the following control measures for tree removal on federal, State, and private land:

- TRPA approval of timber harvesting shall require application of BMPs to the project area as a condition of approval. Application of BMPs is site specific. The Handbook of Best Management Practices identifies the various practices which may apply.

- All logging roads and skid trails shall be constructed and maintained in accordance with the TRPA Code and BMP Handbook, and BMPs shall be installed on all skid trails, landings, and roads prior to seasonal shutdown. Design, grade, tree felling in the right-of-way, slash cleanup, width, maintenance, and type of roads and trails shall meet TRPA standards, as shall cross-drain spacing.

In addition, the TRPA Code sets requirements for timber harvesting. In cases of substantial tree removal, the applicant is required to submit a harvest plan or tree removal plan prepared by a qualified forester. The plan shall set forth prescriptions for tree removal, water quality protection, vegetation protection, reforestation, and other considerations, and shall become part of the project's conditions of approval.

Management techniques for tree removal shall be consistent with the objectives of SEZ restoration, protection of sensitive lands, minimization of new road construction, revegetation of existing temporary roads, minimization of SEZ disturbance, and provisions for revegetation.

TRPA requires that sufficient trees shall be reserved and left uncut to meet minimum acceptable stocking standards, except where patch cutting is necessary for regeneration harvest or early successional stage management. Patch cuts shall be limited in size to less than five acres.

Tree cutting within SEZs may be permitted to allow for early successional stage vegetation management, sanitation cuts, and fish and wildlife habitat improvement, provided that:

- all vehicles shall be restricted to areas outside the SEZ or to existing roads within SEZs, except for over-snow tree removal [The Regional Board will review proposals for use of “innovative technology” vehicles within high erosion hazard lands (i.e., SEZs, steep slopes, etc.) under other circumstances. If it can be demonstrated, preferably through the use of such vehicles in similar environments of the Sierra Nevada **outside** of the Lake Tahoe Basin, that such vehicles cause no greater soil or vegetation disturbance than over-snow tree removal, the Regional Board will consider allowing their use and recommending that TRPA amend the 208 Plan to permit their use], and

- work within SEZs shall be limited to times of year when soils are dry and stable or when snow depth is adequate for over-snow removal, and

- felled trees and harvest debris shall be kept out of all perennial and intermittent streams, and

- crossing of perennial streams or other wet areas shall be limited to improved crossings in accordance with the BMP Handbook or to temporary bridge spans that can be removed upon project completion or the end of the work season, whichever is sooner, and damage to the SEZ associated with a temporary crossing shall be restored within one year of removal, and

- special conditions shall be placed on tree harvest within SEZs or edge zones adjoining SEZs as

necessary to protect instream values and habitat.

Tree removal methods within the various land capability districts shall be limited to the methods shown in Table 5.13-1. (See the discussion elsewhere in this Chapter on the Tahoe Basin land capability system and impervious surface coverage limitations.) Skidding over snow is preferred to ground skidding, and shall be limited to appropriate snow conditions and equipment.

In addition to the forest management control measures above, the following restrictions adopted by the State Board in 1980 are needed to protect water quality:

- No permanent soil disturbance shall be permitted in Stream Environment Zones, on high erosion hazard lands, on soils with low productivity, or on soils with low revegetation potential.

- Forest management activities on high erosion hazard lands shall be solely by means of helicopter, balloon, over snow, or other techniques which will not result in any permanent soil disturbance.

- No vegetation shall be disturbed or removed from Stream Environment Zones except to maintain the health and diversity of the vegetation or to maintain the character of the Stream Environment Zone.

- All tree cutting shall be limited to tree selection operations with the exception of removal of insect-infested or diseased trees or similar measures to maintain the health and diversity of the vegetation. No clearcut logging shall be permitted. TRPA's Regional Plan allows small “patch cuts” for increase in vegetative diversity.

Drought related stresses in the 1980s and early 1990s led to the death of large numbers of forest trees in the Lake Tahoe Basin. Local governments, the CDF, and the USFS are concerned with the prevention of catastrophic fires, especially near urbanized areas. Sanitation-salvage cuts are being proposed on a much larger scale than that envisioned by the State Board in the 1980 *Lake Tahoe Basin Water Quality Plan.* Firebreaks are also being proposed near developed areas, in at least one case on high erosion hazard lands. The water quality impacts of such cutting could be individually and cumulatively significant. Regional Board staff should continue to participate in ongoing interagency “forest health” discussions to address the dead tree problem, to ensure that the health of the watershed is adequately addressed in other agencies' timber harvest proposals. Sanitation salvage clearcuts and fuel breaks should be limited to areas near existing development, and selective fuel reduction techniques should be used in the backcountry and on high erosion hazard lands. Existing understory vegetation should be maintained on fuel breaks to prevent erosion; it could be enhanced with nonflammable native species and irrigated, if feasible, to reduce the risk of wildfire.